

1956

Status of Glueck Prediction Studies

Eleanor T. Glueck

Follow this and additional works at: <https://scholarlycommons.law.northwestern.edu/jclc>

 Part of the [Criminal Law Commons](#), [Criminology Commons](#), and the [Criminology and Criminal Justice Commons](#)

Recommended Citation

Eleanor T. Glueck, Status of Glueck Prediction Studies, 47 J. Crim. L. Criminology & Police Sci. 18 (1956-1957)

This Article is brought to you for free and open access by Northwestern University School of Law Scholarly Commons. It has been accepted for inclusion in Journal of Criminal Law and Criminology by an authorized editor of Northwestern University School of Law Scholarly Commons.

STATUS OF GLUECK PREDICTION STUDIES

ELEANOR T. GLUECK

The following article was presented to the International Congress on Criminology, London, September, 1955.

The author, Research Associate in Criminology, at the Harvard Law School, is co-author with her husband, Professor Sheldon Glueck, of the following works:

Co-author with SHELDON GLUECK of 500 CRIMINAL CAREERS, 1930, New York, Alfred A. Knopf; ONE THOUSAND JUVENILE DELINQUENTS, 1934, Cambridge, Harvard University Press; FIVE HUNDRED DELINQUENT WOMEN, 1934, New York, Alfred A. Knopf; PREVENTING CRIME (Editors), 1936, New York, McGraw-Hill Book Co.; LATER CRIMINAL CAREERS, 1937, New York, The Commonwealth Fund; JUVENILE DELINQUENTS GROWN UP, 1940, New York, The Commonwealth Fund; CRIMINAL CAREERS IN RETROSPECT, 1943, New York, The Commonwealth Fund; AFTER-CONDUCT OF DISCHARGED OFFENDERS, 1945, New York and London, Macmillan Co.; UNRAVELING JUVENILE DELINQUENCY, 1950, New York, The Commonwealth Fund; DELINQUENTS IN THE MAKING, 1952, New York, Harper and Bros.; PHYSIQUE AND DELINQUENCY, 1956, New York, Harper and Brothers.—EDITOR.

I. PREDICTION OF RECIDIVISM

The extensive interest in predictive devices (particularly in the United States) to determine recidivism and the probable response of offenders to various forms of peno-correctional treatment (especially parole) is reflected in the various papers that are summarized in the Report of Professor Sheldon Glueck, Rapporteur General for Section IV of the Congress dealing with The Prognosis and Prediction of Recidivism. In his report there is necessarily only brief reference to the prediction studies that he and I have been making since we began our researches in 1925. This paper provides me the opportunity, therefore, of making a fuller statement to the Congress of the prediction studies for which we are responsible (and which, by the way, constitute but a very small portion of our over-all research program).

Some of you may recall that we and Professor Ernest W. Burgess worked contemporaneously in the development of the earliest prediction instrumentalities and are the authors of the pioneer studies. A considerable literature has developed in this field and various methods of prediction have developed, some of which should satisfy even the most rigid of mathematical statisticians. I do not wish to comment on these methods beyond saying that we personally continue to adhere to the one we originated because we have evidence that "it works." To us, this is the ultimate test of the validity of a prediction device. This does not mean that other methods are not appropriate. They must, however, stand or fall on the strength of their performance on samples of cases other than the ones on which they were constructed, rather than on theoretical discussions of statistical procedures and formulations.

The Glueck method, as it has come to be called, is based purely and simply on the selection from among a number of factors initially gathered with the utmost care to insure their accuracy, those factors (usually five or six) which are found most

markedly to differentiate criminals who do and those who do not adapt satisfactorily to the particular form of correction for which or following which a predictive device is desired. The five factors are combined into a "weighted score" realistically based on their actual association (in terms of percentages) with conduct during the particular form of peno-correction for which the prediction table is being constructed. Those interested in the details of this method are referred to the chapters in our various publications in which this is described.¹ The basic research that underlies arrival at these five factors involves a great deal of care, skill, and time² (not to mention funds), and I suspect this to be the main reason why other methods seem preferred which, though often executed with mathematical precision, are based on raw data often taken either verbally or from records of prisoners and parolees without substantial verification. Without exception, these predictive devices comprise many more than five factors and if (as has been occasionally demonstrated) the results derived by the Glueck method and by one or another method check closely,³ it is our contention that this is due to the fact that of, let us say, some 20 factors comprising one or another of these methods, those few factors among them which happen to be based on accurate data, carry the same "weight" that is represented in our far more discriminatingly selected five or six factors.

Of all the tables we have constructed dealing with the prediction of criminalism during or following specific forms of peno-correctional treatment,⁴ the one dealing with the probable behavior of delinquents in the armed forces⁵ has been applied to another sample of cases and found to be valid; and we now have underway and almost completed the checking, against the sample of 500 juvenile delinquents comprising our latest published research work, "Unraveling Juvenile Delinquency," of

¹ 500 CRIMINAL CAREERS, Chap. XVIII; ONE THOUSAND JUVENILE DELINQUENTS, Chap. XI FIVE HUNDRED DELINQUENT WOMEN, Chap. XVII; LATER CRIMINAL CAREERS, Chap. XII; JUVENILE DELINQUENTS GROWN UP, Chap. XIX; CRIMINAL CAREERS IN RETROSPECT, Chap. XIV-XVI; AFTER-CONDUCT OF DISCHARGED OFFENDERS, Chap. VI; UNRAVELING JUVENILE DELINQUENCY, Chap. XX.

² For those who are not familiar with our research methods, may I suggest consultation of 500 CRIMINAL CAREERS, Chap. V; FIVE HUNDRED DELINQUENT WOMEN, App. A.; ONE THOUSAND JUVENILE DELINQUENTS, Chap. I; LATER CRIMINAL CAREERS, App. A.; JUVENILE DELINQUENTS GROWN UP, Chap. XXI; AFTER-CONDUCT OF DISCHARGED OFFENDERS, Chap. V; and UNRAVELING JUVENILE DELINQUENCY, Chaps. II-VII.

³ GEORGE B. VOLD, in "PREDICTION METHODS APPLIED TO PROBLEMS OF CLASSIFICATION WITHIN INSTITUTIONS" (JOUR. CRIM. L. AND CRIMINOL., Vol. 26, pp. 202-209, 1936) found the substantial coefficient of correlation (r) of .92 between the Burgess method, which utilizes all available factors, *unweighted*, and the Glueck method in which five weighted factors are used. In 1932, ELIO MONACHESE, in his book, PREDICTION FACTORS IN PROBATION (Hanover, N. H.: The Sociological Press, 1932) applied the Glueck prediction method (as originally developed in 500 CRIMINAL CAREERS) and the Burgess method, which utilizes some 20 unweighted factors, to 403 juvenile probation cases of Ramsey County, Minnesota. He reported (p. 108) a coefficient of correlation (r) of .862. See, also, HAKEEM, MICHAEL, GLUECK METHOD OF PAROLE PREDICTION APPLIED TO 1,861 CASES OF BURGERS, JOUR. CRIM. L. AND CRIMINOL., Vol. 36, 2, July-August, 1945.

⁴ See Appendix A at end of this paper.

⁵ See CRIMINAL CAREERS IN RETROSPECT, "Recidivism of Civilian Delinquents in Army or Navy," Table 50, p. 277.

seven of the prediction tables developed in a prior research on a sample of 1,000 delinquents, namely in "Juvenile Delinquents Grown Up."⁶

The first prediction table already validated is based on 200 cases,—men in the United States Army who had been delinquents in civilian life and who then committed military offenses while in the Army. The problem posed was the extent to which we could have predicted, on the basis of this table that these men, formerly delinquents, would be military offenders. Since an article has been published describing this validation those interested can always refer to it.⁷ It need only be said here that the data required to prepare the "prediction scores" on the 200 men were gathered by Army personnel and sent to us for scoring (the factors are *education of parents, intelligence of offender, age at first delinquency, age began work, and industrial skill*). The final result indicated that it could have been foretold that 168 out of the 200 soldiers (84.5 percent) would be "poor risks" for the armed forces in the sense that they would commit military offenses (absence without leave, desertion, theft, forgery, assault, etc.) and that an additional 10 percent had about a fifty-fifty chance of committing military offenses; so that only in 5.5 percent of the total of 200 cases would the prediction table in question have inaccurately screened the men.

It may be of interest that, on the whole, our scoring of the 200 cases on the basis of the predictive factors resulted in a more accurate prediction of actual outcome than would have been accomplished by the more time-consuming method of psychiatric interview. This is shown by the fact that, although in the Army Rehabilitation Center where the men were held for diagnostic study after they became troublesome (*i.e.*, recidivated) 84 percent were diagnosed either as psychopathic personalities, severe psychoneurotics or psychotics, and might therefore have been judged "poor risks" for the armed forces, of 32 men (16 percent of the 200) who were diagnosed as essentially normal or having simple adult maladjustment and who would therefore have been considered as good risks for the Army by the psychiatrists, 21 would have been considered, on the basis of our prediction score, as being *poor* risks (and actually proved to be such), while there would have been hesitation in accepting another six of these men since their likelihood of delinquency in the Army was only a little less than fifty-fifty. By our prediction method only five of the 32 men would have been considered sufficiently good risks to warrant admission to the armed forces.

Of particular encouragement in pursuing further checks on our prediction method was the discovery in the Army study that certain important differences in the background of offenders seem not to affect the efficiency of the tables as long as the predictive factors themselves are available and are accurately scored. For example, in the Glueck series of 131 cases on which the original prediction table was constructed, all were residents of the state of Massachusetts, 64.8 percent were Catholics, 31.3 percent Protestants, and 3.9 percent Hebrews. In the Army Rehabilitation Center

⁶ "Prediction of Behavior During Fifteen Years Following Handling By a Juvenile Court," p. 142; "Prediction of Behavior During Probation," p. 203; "Prediction of Behavior During Probation With Suspended Sentence," p. 205; "Prediction of Behavior During Parole," p. 207; "Prediction of Behavior in Industrial and Correctional Schools," p. 209; "Prediction of Behavior in Reformatories," p. 210; "Prediction of Behavior in Prisons," p. 211.

⁷ SCHNEIDER, A. J. N., LAGRONE, JR., C. W., GLUECK, E. T. AND S., *Prediction of Behavior of Civilian Delinquents in the Armed Forces*, MENTAL HYGIENE, Vol. 28, No. 3, July, 1944.

series, on the other hand, the men were residents of 24 different states, 20 percent were Catholics and 80 percent Protestants. Another difference in the background of the two series is revealed in the fact that in the Glueck series 82.4 percent of the men came from large cities, 6.2 percent from small towns, and 11.4 percent from rural areas, while in the Army Rehabilitation Center series 24.5 percent were from large cities, 37 percent came from small towns, and 38.5 percent from rural areas.

The first validation of one of our predictive devices and its applicability to a sample of cases of different and more varied make-up than the original sample of cases on which it had been constructed, encouraged us to pursue the long-term and extensive investigation we began in 1940 to test on the 500 boys included in the work, "Unraveling Juvenile Delinquency," seven of the prediction tables prepared in "Juvenile Delinquents Grown Up."⁸

When the 500 offenders reported on in "Unraveling Juvenile Delinquency" were initially selected, a "prediction chart" encompassing the seven tables was compiled for each boy. This was laid aside pending the actual findings of a "follow-up" inquiry designed to record the behavior of the boys during all the peno-correctional treatments (probation, probation with suspended sentence, correctional school, reformatory, prison, parole) to which they were subjected from the onset of their delinquent careers until they reached the age of 23. As the boys ranged in age from 10 to 17 years when first included in the study, the inquiry, begun in 1940, is still in process, 360 cases being entirely completed. The gathering of these data by a highly skilled staff has thus far encompassed at least 5,000 peno-correctional experiences. We have spared no effort to follow closely the criminal careers of these 500 boys and the predictions made in 360 cases have already been compared with the actual behavior of the boys during the various forms of peno-correctional treatment under study. It is already obvious that in the completed cases the capacity of the seven tables to predict delinquent behavior during and following the entire gamut of peno-correctional treatments is very great. We can of course not present you with actual figures as the work is still in process.

There are many ramifications of this study which I cannot take the space to describe here beyond saying that the data gathered will not only serve to check the seven prediction tables published in "Juvenile Delinquents Grown Up" but should make it possible to refine them to include (1) the age span in which adjustment to various forms of extramural and intramural treatment typically occurs, and (2) the age span of cessation of recidivism. It provides the opportunity also to compare the accuracy of the predictions made by the Glueck method with predictions made by the psychiatrists and also by the Rorschach experts who were associated with us in studying the boys included in "Unraveling Juvenile Delinquency". It makes it possible also to focus attention on the very small proportion of cases in which the predictions made by us are *not* found to agree with the actual outcome, thus providing hypotheses for further exploration. (Purely as an aside, this particular prediction-validation study is suggesting some "clues" to effective peno-correctional treatment in different types of boys and apparent reasons for unsatisfactory responses to various forms of peno-correctional treatment.)

⁸ See Note 6.

Assuming successful validation of these tables (and the evidence to date permits of optimism in this regard), it should be evident that we are well on the road to completing a network of instrumentalities not only to predict recidivism of juvenile and young adult offenders, but their probable behavior *during* various forms of peno-correctional treatment,—probation, probation with suspended sentence, correctional school, reformatory, prison, parole, as well as the age span in which satisfactory behavior is likely to occur among various types of offenders and in which recidivism ceases. (See Appendix A)

The extent to which these predictive devices may be applicable to delinquents beyond the borders of the United States awaits experimental evidence. If the factors associated with delinquency are not found to vary from country to country and the peno-correctional methods are essentially analogous, there is no reason to suppose that these tables would *not* be applicable. However, it is evident that a great deal of research in testing the usefulness of these tables in various countries would have to be systematically undertaken before it could be determined whether the tables we have developed have any bearing outside the United States. Perhaps our English colleagues, who have been experimenting with the development and use of prediction devices, already have some findings in this regard.

This is necessarily a highly abbreviated statement of the prediction tables we have already developed which concern various aspects of recidivism. It is well to reiterate the statement already made that regardless of any criticism there may be of our "weighted score" method or of the idea of prediction in general, there is after all only one real test of their validity and that is how such tables check against samples of cases not only of the same but of different backgrounds or composition than the sample on which the tables were constructed.

Before turning to a consideration of the studies we are making that have to do not with recidivism but with the early detection of potential delinquents, I wish to report another relevant project underway. Encouraged by the validation of our Army Prediction Table, we are taking the opportunity provided us by a further investigation at the age of 25 of the 500 delinquents and 500 nondelinquents who comprised "Unraveling Juvenile Delinquency" (who, it will be recalled, ranged in age from 10 to 17 years when we first examined them) to determine the behavior in the Armed Forces of the United States (Army, Navy, Marine Corps and Coast Guard) of both the delinquents and the non-delinquents (a large proportion of whom either served in World War II or subsequently in Korea and in the peace-time Services) to build up a table designed to screen not only former delinquents but also non-offenders who would not be "good risks." This inquiry, initiated in 1953, was undertaken with the full cooperation of Colonel Van H. Tanner of the Air Force Personnel and Training Research Center, Air Research and Development Command, Maxwell Air Force Base, Montgomery, Alabama (U. S. A.) who, with his field staff, has been furnishing us data about the conduct of the men in the Army. Similar excellent cooperation has been provided by the U. S. Navy, Marine Corps, and Coast Guard. Since fully 600 of our 1,000 men have been in one or another Service, we anticipate the preparation of a useful series of prediction (or, as we prefer to call them, screening) tables.

II. DETECTION OF POTENTIAL DELINQUENTS

Although this Congress deals specifically with the subject of recidivism, I venture to suggest that broadly interpreted, the detection of potential delinquents for the purpose of initiating preventive-correction is rightly within the scope of our topic. Such an approach should eventually lead to a reduction of recidivism if not to its prevention.

Those who are familiar with "Unraveling Juvenile Delinquency" know that Professor Glueck and I presented there three tables which sharply differentiate the 500 delinquents from the 500 non-delinquents:⁹ one derived from five factors in the family background;⁹ one derived from five traits in their underlying character-structure as determined by the Rorschach Test;¹⁰ and one stemming from five of the most differentiative traits of personality and temperament, as originally derived in a psychiatric interview with each boy by our staff psychiatrist.¹¹

Although the boys in "Unraveling Juvenile Delinquency" ranged in age from 10-17 years, we set ourselves the task of selecting from among the social factors and the traits which were found most markedly to differentiate the delinquents from the non-delinquents, those which would already be operative or evident at six years of age, in order that we might construct instruments for the early detection of potential offenders. The social factors proved to be supervision of boy by mother, discipline of boy by father, affection of mother for boy, affection of father for boy, and unity of the family group. The character traits derived from the Rorschach Test that we finally selected as sufficiently differentiative of delinquents and non-delinquents to make a suitable predictive device are social assertion, defiance, suspicion, destructiveness, and emotional lability. In regard to traits of temperament derived from the psychiatrists' examination of the boys, the following five were utilized, adventurousness, extroversion of action, suggestibility, stubbornness and emotional instability.

Ever since the publication of "Unraveling Juvenile Delinquency" there has been considerable discussion about the applicability of these tables to groups differing in composition from those on whom they were initially constructed; and most particularly as to their applicability to boys as young as six. We see only one definitive way of resolving these questions, and that is by applying the tables to various samples of cases differing from the group on whom they were initially constructed. The possibly relevant differences involve ethnic origins, age distribution, socioeconomic status, types of neighborhoods and intelligence level. It is important, also, to apply the tables experimentally to a large group of boys at the point of school entrance, and to follow these youngsters for several years, in order to determine to what extent the predictions made at this early stage in their lives prove to be accurate.

⁹ Prediction of Potential Delinquents Based on Five Factors in Social Background, Table XX-3, p. 262.

¹⁰ Prediction of Potential Delinquents Based on Five Character Traits Derived From Rorschach Test, Table XX-7, p. 264.

¹¹ Prediction of Potential Delinquents Based on Five Personality Traits Derived by Psychiatric Examination, Table XX-11, p. 266.

Several validation studies applying our tables, retrospectively, to boys already delinquent have been made to date and others are in process. While they cannot be regarded as absolutely definitive, they do afford persuasive evidence that the tables presented in "Unraveling Juvenile Delinquency" are soundly based and markedly discriminative of delinquents and non-delinquents.

In the spring of 1952 the first validation study appeared, assessing the effectiveness of the Social Prediction Table. This study was made by Bertram J. Black and Selma J. Glick of the Jewish Board of Guardians, New York City. It is reported in a monograph entitled "Predicted vs. Actual Outcome for Delinquent Boys" (New York, The Jewish Board of Guardians, 1952). The table was applied to a group of 100 Jewish boys who were then confined in the Hawthorne-Cedar Knolls School in New York State, with a view to determining the extent to which it would have been possible, if the predictive instrument had been utilized years earlier when the boys were only beginning to show some signs of aberrant behavior which might or might not have been a foreshadowing of delinquency, to have accurately identified them as potentially serious delinquents. Black and Glick ascertained that 91 percent of the group would have been accurately identified by the table in question. It might be stated parenthetically that under the auspices of the Jewish Board of Guardians there has recently been completed a similar inquiry (as yet unpublished) concerning 150 Jewish unmarried mothers, with the finding that the Social Prediction Table would have identified 81 percent as potential delinquents if applied several years before they were committed to the Hawthorne-Cedar Knolls School.

It is of especial significance that while our table was compiled on the basis of underprivileged Boston boys, largely of English, Italian and Irish descent, and of Protestant and Catholic religions, it was found to operate so satisfactorily on a sample of New York Jewish boys; and that although it is based on boys, it yields such high predictive results when applied to girls.

Another study, by Richard E. Thompson, entitled "A Validation of the Glueck Social Prediction Scale for Proneness to Delinquency" (published in the November-December, 1952, issue of this JOURNAL establishes the Social Prediction Table as a valid instrumentality for distinguishing from among children showing behavioral difficulties, those who are true delinquents and those whose maladjusted behavior is probably temporary. It shows that among a representative group of 100 boys, included originally in a research in Massachusetts known as the Cambridge-Somerville Youth Study,¹² it would have been possible (as in the study by the Jewish Board of Guardians) to identify accurately 91 percent of all the boys as either potential delinquents or as true non-delinquents. Here, too, as in the Army study, the predictive accuracy of the table was considerably greater than that of three clinicians (psychiatrist, psychologist, and criminologist) who had been initially charged with selecting the boys for the Cambridge-Somerville Youth Study. Thompson reports that in the light of the actual behavior of the boys subsequent to their selection for the study, the clinicians had correctly identified 65 percent of the boys as true pre-

¹² POWERS, EDWIN AND WITMER, HELEN, AN EXPERIMENT IN THE PREVENTION OF DELINQUENCY, New York, 1951, Columbia University Press.

delinquents or true non-delinquents, in comparison with 91 percent correctly identified by the Social Prediction Table.¹³

In this inquiry as in the Army study and in that of the Jewish Board of Guardians, the Prediction Table reveals a capacity for usefulness on boys of different status and background from that of the boys on whom it was originally constructed, for its power was maintained among the boys in the Cambridge-Somerville Study who were younger than the boys in "Unraveling Juvenile Delinquency"; on those who were of different ethnic origin; on those who were of higher intelligence; on those of better economic status; and on those who grew up in neighborhoods that were not as disadvantaged as those in which the boys in "Unraveling Juvenile Delinquency" were reared.¹⁴

More recently (summer, 1954), Thompson, in an as yet unpublished study, applied the Social Prediction Table to a random sample of 50 boys appearing before the Boston Juvenile Court in 1950 who averaged 13.1 years of age (as compared with an average age of 14.6 years of the boys in "Unraveling Juvenile Delinquency") and found that it would have been possible (in retrospect of course) to determine, had the table been applied at the age of six years, that 92 percent would become delinquents. These boys also differed in some ways from the original sample of cases on which the table had been constructed. Not only were they younger, but half of them had no prior court appearances (all the boys in "Unraveling Juvenile Delinquency" had been in court before). The religious distribution of these boys was also different, a higher proportion being Protestants than in the group studied in "Unraveling Juvenile Delinquency". They were less retarded in school than the boys in "Unraveling Juvenile Delinquency". In a higher proportion of cases they were the sons of two native-born parents; and finally in a far higher proportion one or both of their parents had attended high school. Here again is evidence of the capacity of the table to discriminate between delinquents and non-delinquents on samples of different composition from the original.

Another opportunity to test the validity of the Social Prediction Table came in 1954 when the Douglas A. Thom Clinic for Children in Boston (a psychoanalytically oriented clinic) applied it to a selected sample of 54 boys ranging in age from six to twelve years who had been treated for aggressive, destructive, antisocial behavior. The scorings made by the clinic psychologist indicated that 83.3 percent of these boys would have been clearly identified by the table at the age of six years as potential delinquents. There is some question whether the boys not correctly identified by our table were really pre-delinquents (this can only be determined by intensive follow-up studies). However, the evidence of the value of the table has been sufficiently convincing to the clinicians themselves to encourage them in applying it to all their current cases (109 in number); and they are now at work on determining "what nuclear aspect of family interrelationships are reflected in the seemingly gross items regarding family life which make up the Social Prediction Table. We hope to contribute some dynamic formulations regarding this question."¹⁵

¹³ See p. 464 *et seq.* of Thompson article.

¹⁴ *Ibid.*, pp. 467, 468, 469.

¹⁵ Report to Professor and Mrs. Sheldon Glueck prepared by Dr. Eveleen Rexford, Director of the Clinic, June, 1954.

Still another check on the Social Prediction Table was published in April, 1955.¹⁶ This is a study made by the Department of Institutions and Agencies of the State of New Jersey (U. S. A.) in which the table was applied to 51 delinquent boys who were on parole. Because of the great similarity between the findings in "Unraveling Juvenile Delinquency" and the New Jersey Study, I present the comparisons here:

TWO-CLASS PREDICTION TABLE FROM FIVE FACTORS OF SOCIAL BACKGROUND
OF DELINQUENT BOYS¹⁷

Weighted Failure Score Class	Unraveling Juvenile Delinquency	New Jersey Study
Under 250 (little likelihood of delinquency)	% 14.2	% 19.6
250 and over (great likelihood of delinquency)	85.8	80.4
Total	100.0	100.0

The close resemblance in the distribution of both groups of cases is striking. I quote from the New Jersey Report:

It will be observed that the closeness of the findings on the basis of the New Jersey data with the original findings in the study of "Unraveling Juvenile Delinquency" is rather noteworthy, since the New Jersey boys were selected at random, and no attempt was made to match the individual characteristics of the New Jersey delinquent boys with the delinquent boys included in the Harvard Law School Study.¹⁸

Thus far only the Social Prediction Table has been tested, because this one, of all the three tables presented in "Unraveling Juvenile Delinquency", is the most readily applied and does not require the highly specialized and far less available psychologic and psychiatric services which would be needed in utilizing the other two tables. Before turning to the question of whether an instrumentality of greater predictive value than the one based on the five social factors could be developed, it is well to observe that the capacity of all three tables to distinguish between true delinquents and true non-delinquents seems to be quite similar.

In order not to rely on mere inspection of the tables to determine their similar discriminative capacity, we proceeded in 1953 to encompass in one table the five social factors and the five psychiatric traits; in another table, the five social factors and the five traits of character structure; in a third table, the five psychiatric traits with the five traits of character structure. We also made a combination of all 15 factors and traits into one prediction table. We further selected, from among the 15, the five that most markedly discriminated between delinquents and non-delinquents. This resulted in a table comprised of two social factors (supervision of boy by mother, cohesiveness of family), two psychiatric traits (stubbornness, adventurousness), and one trait of character structure (defiance). A final combination of the four most

¹⁶ *Predicting Juvenile Delinquency*, RESEARCH BULLETIN Number 124, April, 1955, published by Department of Institutions and Agencies, Trenton, New Jersey (U. S. A.).

¹⁷ *Ibid.*, p. 10.

¹⁸ *Ibid.*, p. 9.

potent factors among these five resulted in eliminating the trait of character structure, defiance. None of these combinations of factors and traits yielded a table of sufficiently greater predictive capacity than the original Social Prediction Table to warrant the burden in time and expense which the inclusion of Rorschach Tests or psychiatric examinations would impose on school systems, guidance clinics, correctional agencies, and other groups who would wish to use them. We have therefore emerged from this inquiry with the conclusion that the Social Prediction Table developed in "Unraveling Juvenile Delinquency" remains the most satisfactory one for practical use. Experienced welfare workers, teachers, psychologists and others, of whom there are many more available than there are Rorschach or psychiatric experts, can learn to use the Social Prediction Table after relatively brief experience with it. A paper detailing our findings are soon to be published in the Journal.

It is because of the discovery that the Social Prediction Table is not only as effective an instrumentality as the other two tables but as any combination of these two or as any combination of five of the fifteen factors and traits encompassed in all three tables, that we are particularly pleased that an experimental application of the Social Prediction Table to children at the age of six is going forward in New York City. All the successful checking of the Social Prediction Table so far accomplished deals with its application "in retrospect," *i.e.*, *after* the onset of delinquency; while in the New York experiment the table is being applied to children at the point of school entrance, and they will be "followed-up" in order to determine the extent to which the prediction of potential delinquency checks with actual developments in each case. A full account of this experiment appears in this JOURNAL.¹⁹ Briefly, however, the New York City Youth Board, which is a publicly financed agency charged with a coordinated program directed toward the prevention of delinquency, initiated an experiment in two public schools in areas of very high delinquency in New York City applying it to all boys in the entering class to determine by follow-up investigation until they reach eleven years whether their identification at the age of six by our Social Prediction Table as potential delinquents is correct.²⁰

At the present writing, 76 potential delinquents have been discovered out of some 325 boys. The 249 boys defined by the Prediction Table as non-delinquents are also being followed up to determine whether their identification by the table as *non-delinquents* is proven to be correct.

During this year considerable strides have been made and the experiment is now established and accepted by principals, teachers and parents of the children in-

¹⁹ WHELAN, RALPH W., *An Experiment in Predicting Delinquency*, JOUR. OF CRIM. L., CRIMINOL. AND POL. SCI., Vol. 45, No. 4, November-December, 1954 (U.S.A.).

²⁰ Another aspect of this particular inquiry and one which provides a great challenge to welfare workers, educators, and psychotherapists is being designed to determine the extent to which appropriate psychotherapy will result in curbing the development of delinquent careers. We have already pointed out to the members of the Youth Board that in the conduct of a therapeutic experiment the application of the Rorschach Table and the Psychiatric Prediction Table, as supplements to the Social Prediction Table, especially in doubtful cases, would be of great value in furnishing direction to clinicians by revealing the extent to which the delinquent behavior, as reflected in the traits encompassed in these latter two tables, is deep-seated in nature. It is hoped that through the New York Youth Board experiments, new forms of personality and character therapy will be stimulated.

volved. The New York City Youth Board has recently reported to us that it has found that while 17 percent of the boys who had been rated by the Social Prediction Table as potential non-delinquents are showing some behavioral difficulties in school, 72 percent of the boys whom the table had identified as potential delinquents are already manifesting behavior difficulties. Although the evidence is as yet inconclusive because it is concerned only with *school* misbehavior, it at least indicates some likelihood in the direction of the ability of the table to discriminate between potential delinquents and true non-delinquents. More intensive "follow-up studies" are planned to include inquiry into the behavior of the boys in home and community. Significantly enough, the clinicians who are at work in treating half the potential delinquents (the other half is being used as a "control" to make possible a determination of the effectiveness of treatment) have found through their intensive psychiatric and psychological examinations of these children that almost without exception mental pathology is present in them (severe neuroticism, prepsychotic manifestations, character disorders, mental defectiveness). This also constitutes some evidence that the table has a high selective capacity.

Several excellent statements about the Youth Board project have appeared in the press and in professional journals during the course of the year and have stimulated a great deal of interest throughout the United States. The project provides an opportunity for working out policies, methods, and procedures, not only in the large-scale identification of potential delinquents but in their treatment. As the therapy of very young pre-delinquents must include and even center in treatment of the families, much has to be done, for example, in discovering the rehabilitation potential of families, because it is in the family interrelationships that we have found, in "Unraveling Juvenile Delinquency," the greatest impact on delinquency of the children.

The personnel of the Youth Board who are engaged in the Project, share our feeling that if the Social Prediction Table properly distinguishes potential delinquents from non-delinquents, an impetus will be given to the prophylaxis of delinquency on a large scale.

I hesitate as yet to say anything concerning the significance for the prediction (or diagnosis, if you will) of potential delinquency, of certain findings that have emerged from our most recent and soon to be published work, "Physique and Delinquency," beyond saying that we have succeeded in identifying clusters of factors and traits occurring in combination which most markedly differentiate delinquents and non-delinquents of each body type. These could furnish the basis for new predictive devices taking the physique dimension into account, but we are not encouraging such a development at the present time.

Recently (December, 1954) we have completed some tables from breakdowns of data in "Unraveling Juvenile Delinquency" (paper recently published) on the basis of which it should be possible to distinguish between (a) neurotic delinquents and neurotic non-delinquents, and (b) neurotic delinquents versus non-neurotic delinquents. As the data from which the tables were constructed are from the same basic raw materials that furnished the other prediction tables in "Unraveling Juvenile Delinquency," we have no reason to believe that the application of the new tables

will be any less successful than the Social Prediction Table. However, it is our hope that publication of the new tables will result in stimulating their experimental use.

Within the next few years, after a sufficient number of validation studies have been made, it is our plan to prepare a Prediction Handbook in which we would draw together much of our data on prediction, as well as summaries of the validation studies made of our tables by others, together with instructions for gathering the necessary data and for applying the tables. Such a Handbook would encompass not only the materials directed toward the identification of potential delinquents, but the prediction of recidivism and of behavior during various forms of peno-correctional treatment. The experience we are deriving from our participation not only in the Youth Board project but in giving guidance to those who are carrying on studies designed to check our prediction tables is serving to direct our attention to the instructions which would have to be furnished to those who would want to utilize them.

I have not adverted to any application of our Social Prediction Table by any of our English colleagues, but it is the hope of Professor Glueck and myself that a report of the results of any such studies will be forthcoming. We know, for example, that the table is being used in the Approved Schools Classification Center in Bristol, England by Dr. Frank Bodman, Chief Psychiatrist.

We would welcome such reports not only from Britain but from other colleagues including those in the United States who are quietly experimenting with use of the Social Prediction Table.

In conclusion, may I emphasize, as Professor Glueck and I have done in many of our publications, that prediction tables are no substitute for clinical experience. They are not to be applied mechanically. Rather, they are supplements to clinical insight, based on objectified experience with hundreds of cases. True "individualization" in the management of recidivists and of potential offenders can be made more accurate and effective, however, by the use of such tables. Although much still remains to be done in this field (as, for example, to explore the reasons for the high prognostic capacity of the factors employed in these tables) we feel that more than a substantial beginning has been made not only in the development of a considerable number of tables but in checking and validating them.

APPENDIX A

PART I. TABLES PREDICTING RECIDIVISM

The tables are listed in order of publication. The titles do not conform to those originally assigned them. To avoid any confusion I have indicated the table and page numbers of the particular volume in which they appear.

In the early years of experimentation with our "weighted score" method, we were not as aware, as we later became, of the necessity of avoiding where possible any overlapping of the predictive factors; and also of selecting from among a number of possibilities those particular factors which are less difficult to gather than others by persons who might ultimately be charged with this task when applying the tables.

Beneath each table title appears the cluster of predictive factors. Definitions of these factors will be found either in the text or the appendices of the various volumes. Ultimately all these data, including the tables themselves, will be incorporated into a Prediction Handbook.

"500 CRIMINAL CAREERS" (Alfred A. Knopf, New York, 1930)

1. Recidivism of Young Male Adult Offenders During Five Years After Completion of Parole From Reformatory (Table 112, p. 285)
(Industrial habits preceding sentence to reformatory, Seriousness and frequency of pre-reformatory crimes, Arrests for crimes preceding offense for which reformatory sentence imposed, Penal experience preceding commitment to reformatory, Economic responsibility preceding sentence to reformatory, Mental abnormality on entrance to reformatory)
- "FIVE HUNDRED DELINQUENT WOMEN" (Alfred A. Knopf, New York, 1934)
2. Recidivism of Young Adult Female Offenders During Five Years After Completion of Parole Following First Term in a Reformatory (Table 9, p. 290)
(Retardation in school, Neighborhood influences within a year of commitment, Steadiness of employment, Economic responsibility, Mental abnormality)
3. Recidivism of Young Adult Female Offenders During Parole After First Term in a Reformatory (Table 10, p. 292)
(Above five factors plus kind of worker in reformatory, and Recreations and interests during parole)
4. Recidivism of Young Adult Female Offenders During Five Years After Completion of Parole Following a Second Term in Reformatory (Table 12, p. 296)
(All factors in above two tables, plus Neighborhood influences and Economic responsibility following completion of first reformatory sentence, Family relationships, Household stability)
- "ONE THOUSAND JUVENILE DELINQUENTS" (Harvard University Press, Cambridge, 1934)
5. Recidivism of Male Juvenile Offenders During Five Years Following Completion of Sentence Imposed by Juvenile Court (Table XXIX, p. 188)
(Discipline by father, Discipline by mother, School retardation, Conduct in school, Age at first misbehavior, Length of time between onset of delinquency and court-clinic examination)
- "LATER CRIMINAL CAREERS" (The Commonwealth Fund, New York, 1937)
6. Recidivism of Young Adult Male Offenders During Ten Years Following Completion of Parole From Reformatory (Table 32, p. 141)
(Work habits, Economic responsibility, Age at first known delinquency, Prior arrests, Mental disease or distortion)
- "JUVENILE DELINQUENTS GROWN UP" (The Commonwealth Fund, New York, 1940)
7. Recidivism of Male Juvenile Offenders During Probation (Table 70, p. 203)
(Birthplace of father, Discipline by father, Discipline by mother, School retardation, School misconduct)
8. Recidivism of Male Juvenile Offenders During Probation Under Suspended Sentence (Table 72, p. 205)
(Birthplace of father, Discipline by father, Discipline by mother, Affection of father for offender, School misconduct)
9. Recidivism of Male Juvenile Offenders During Parole (Table 74, p. 207)
(Birthplace of father, Birthplace of mother, Discipline by father, Discipline by mother, School misconduct)
10. Recidivism of Male Juvenile Offenders in Correctional School (Table 76, p. 209)
(Moral standards of childhood home, Number of children in family, Conjugal relations of parents, Habits of offender, Time between first misbehavior and first arrest)
11. Recidivism of Former Male Juvenile Offenders in Reformatory (Table 78, p. 210)
(Birthplace of father, Conjugal relations of parents, Intelligence of offender, School misconduct, Member of Gang or Crowd)
12. Recidivism of Former Male Juvenile Offenders in Prison (Table 80, p. 211)
(Age of younger parent at marriage, Conjugal relations of parents, Discipline by father, Affection of father for offender, Age of offender at first arrest)
- "CRIMINAL CAREERS IN RETROSPECT" (The Commonwealth Fund, New York, 1943)
13. Recidivism of Young Adult Male Offenders During Fifteen Years After End of Parole From Reformatory (Table 18, p. 224)
(Number of children in family, Economic status of parents, Skill of father, Intelligence of offender, Age at first delinquency)
14. Recidivism of Young Adult Male Offenders During Extramural Peno-correctional Treatments (Table 21, p. 236)

- (Number of children in family, Broken or inadequate home, Age at first delinquency, Grade attained in school, Industrial skill)
15. Recidivism of Young Adult Male Offenders During Probation (Table 22, p. 237)
(Family relationships, Education of parents, Church attendance, Age at first delinquency, Number of children in family)
16. Recidivism of Young Adult Male Offenders During Probation Under 27 Years of Age (Table 23, p. 239)
(Age at first delinquency, Bad habits in childhood, Church attendance, Family relationships, Industrial skill before 21 years of age)
17. Recidivism of Young Adult Offenders During Probation At 27 Years and Older (Table 24, p. 239)
(Number of children in family, Economic status of parents, Broken or inadequate homes, Age at first delinquency, Mental disease or distortion)
18. Recidivism of Young Adult Male Offenders During Probation on Suspended Sentence Under 32 Years of Age (Table 25, p. 242)
(Nativity of offender, Age at first delinquency, Intelligence of offender, Mobility, Use of leisure)
19. Recidivism of Young Adult Male Offenders During Probation on Suspended Sentence at 32 Years of Age and Older (Table 26, p. 242)
(Number of children in family, Economic status of parents, Intelligence of offender, Age at first delinquency, Industrial skill)
20. Recidivism of Young Adult Male Offenders During Parole (Table 27, p. 243)
(Education of parents, Number of children in family, Broken or inadequate homes, Intelligence, Grade attained in school)
21. Recidivism of Male Offenders During Parole Under 22 Years of Age (Table 28, p. 248)
(Delinquency in family, Age at first delinquency, Bad habits, Industrial skill, Physical condition)
22. Recidivism of Male Offenders During Parole in Age Span 22-26 Years (Table 29, p. 249)
(Delinquency in family, Economic status of parents, Broken or inadequate homes, Work habits, Economic responsibility)
23. Recidivism of Male Offenders During Parole in Age Span 27 Years or Older
(Nativity of offender, Rank of offender among siblings, Age at first delinquency, Use of leisure, Physical condition)
24. Recidivism of Young Male Adult Offenders During Intramural Treatments (Table 31, p. 253)
(Nativity of parents and offender, Education of parents, Number of children in family, Grade attained in school, Age at first delinquency)
25. Recidivism of Male Offenders in Correctional School (Table 32, p. 257)
(Criminality or delinquency in family, Usual economic status of parents, Intelligence, Age began work, Age at leaving home)
26. Recidivism of Male Offenders in Correctional Schools Under 17 Years Old (Table 33, p. 259)
(Family relationships, Age at first delinquency, School retardation, Age at leaving home, Age began work)
27. Recidivism of Male Offenders in Correctional Schools at 17-21 Years Old (Table 34, p. 259)
(Nativity of parents and offender, Economic status of parents, Family relationships, Economic responsibility of offender, School retardation)
28. Recidivism of Male Offenders in Reformatory (Table 35, p. 260)
(Nativity of parents and offender, Education of parents, Broken or inadequate homes, Age at first delinquency, Industrial skill)
29. Recidivism of Male Offenders in Reformatory in Age Span 17-21 Years (Table 36, p. 264)
(Intelligence of offender, Age at first delinquency, Grade attained in school, Family relationships, Industrial skill)
30. Recidivism of Male Offenders in Reformatory in Age Span 22-26 Years (Table 37, p. 264)
(Delinquency in family, Broken or inadequate home, Occupation of mother, Age of offender at first delinquency, Intelligence of offender)
31. Recidivism of Male Offenders in Reformatory in Age Span 27 Years and Over (Table 38, p. 266)
(Education of parents, Economic status of parents, Work habits, Economic responsibility, Use of leisure)

32. Recidivism of Young Adult Male Offenders in Prison (Table 39, p. 266)
(Nativity of parents and offender, Education of parents, Broken or inadequate home, Intelligence, Age at first delinquency)
33. Recidivism of Male Offenders in Prison Under 27 Years Old (Table 40, p. 268)
(Education of parents, Intelligence of offender, Broken or inadequate home, Age at first delinquency, Industrial skill)
34. Recidivism of Male Offenders in Prison in Age Span 27-31 Years (Table 40, p. 268)
(Nativity of parents and offender, Education of parents, Conjugal Relations of Parents, Number of siblings, Intelligence of offender)
35. Recidivism of Male Offenders in Prison in Age Span 32-36 Years (Table 42, p. 270)
(Number of siblings, Intelligence of offender, Grade attained in school, Conjugal relations of parents, Broken or inadequate home in childhood)
36. Recidivism of Male Offenders in Prison at 37 Years and Older (Table 43, p. 270)
(Rank of offender among siblings, Intelligence of offender, Grade attained in school, Age at first delinquency, Industrial skill)
37. Recidivism of Male Offenders in Jail (Table 44, p. 271)
(Nativity of parents and offender, Usual economic status of parents, Rank of offender, Grade attained in school, Age began work)
38. Recidivism of Male Offenders in Jail Under 22 Years Old (Table 45, p. 273)
(Number of siblings, Broken or inadequate home, Grade attained in school, Age at first delinquency, Age at leaving home)
39. Recidivism of Male Offenders in Jail in Age Span 22-26 Years (Table 46, p. 274)
(Number of siblings, Economic condition in childhood, Mobility, Age began work, Industrial skill)
40. Recidivism of Male Offenders in Jail in Age Span 27-31 Years (Table 47, p. 274)
(Number of siblings, Intelligence of offender, Economic status of childhood home, Age began work, Industrial skill)
41. Recidivism of Male Offenders in Jail in Age Span 32-36 Years (Table 48, p. 276)
(Conjugal relations of parents, Broken or inadequate home, School misconduct, Industrial skill, Mental disease or distortion)
42. Recidivism of Male Offenders in Jail in Age Span 37 and Older (Table 49, p. 276)
(Intelligence of offender, Age at first delinquency, School retardation, School misconduct, Mobility)
43. Recidivism of Civilian Delinquents in Army or Navy (Table 50, p. 277)
(Education of parents, Intelligence of offender, Age at first delinquency, Age began work, Industrial skill)
44. Recidivism of Civilian Delinquents in Army or Navy While Under 22 Years of Age (Table 51, p. 279)
(Economic status of parents, Conjugal relations of parents, Number of siblings, Grade attained in school, Industrial skill)
45. Recidivism of Civilian Delinquents in Army or Navy at 22 Years or Older (Table 52, p. 279)
(Nativity of offender, Economic status of parents, Conjugal relations of parents, Broken or inadequate home, Industrial skill)

PART II. TABLES IDENTIFYING POTENTIAL DELINQUENTS

"UNRAVELING JUVENILE DELINQUENCY" (The Commonwealth Fund, New York, 1950)

46. Prediction of Potential Delinquency (based on five factors in social background) (Table XX-3, p. 262)
(Discipline of boy by father, Supervision of boy by mother, Affection of father for boy, Affection of mother for boy, Cohesiveness of family)
47. Prediction of Potential Delinquency (based on five character traits derived from Rorschach Test) (Table XX-7, p. 264)
(Social assertiveness, Defiance, Suspiciousness, Destructiveness, Emotional lability)
48. Prediction of Potential Delinquency (based on five personality traits derived by psychiatric examination) (Table XX-11, p. 266)
(Adventurousness, Extroversion in action, Suggestibility, Stubbornness, Emotional Instability)